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THE TORQUE·TUBE

THE NEWS PUBLICATION FOR MEMBERS OF THE 1937-1938 BUICK CLUB • FOUNDED 1980

Volume VII · Number 9

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VOL. VII, NO. 9 ☐ JULY 1989

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Club News

This issue will be late, as the "late summer" issue usually is. The causes — or excuses — for this are several, all coming down to summer's being a time for doing things and going places in the hobby, rather than sitting, thinking, and writing. I am, in truth, very short of material to put in this and subsequent issues, and am thus renewing my time-worn harangue: this is your Club, folks. As man cannot live by bread alone, so cannot the Club live by my efforts alone. The Torque Tube does not spring forth full-grown from my brain, as Athena sprang from the head of Zeus. Such things are possible only in myths. A fair amount of work goes into it, and it cannot continue in its present form without continuing contribution from the members.

The sharing of technical material and "know-how" is plainly useful, and one of the virtues of this publication. However, as no great structure can be supported on a single column, nor any arch hang suspended upon a single pier, so does this publication — and indeed the life of this organization — require more than technicalia to hold it up. The sharing of personal experience — a sense of fellowship, if you will — is equally important. Successful car clubs, be they this one, or BCA Chapters, or whatever, have achieved this; unsuccessful ones have not.

Therefore, friends, let us hear and read about your experiences. They need not be triumphs. Tragedies survived and adversities overcome, or at least lived with, are equally welcome. Indeed, as any psychologist or "shrink" will tell you, it is positively beneficial to the patient to find out that he (or she) is not the only one with a problem. "Old-car" magazines tend to be heavy on success stories: here is a successfully-rebuilt engine; here a beautifully-restored car rescued from a slime-pit; here a guy who drove his cross-country with nary a blip of the ammeter or a slip of the fan belt. Such tales and pictures are fine, and may have some inspirational effect. Per contra, this is a hobby in which it is all too easy to get discouraged and lose interest, and many of us

— myself included — may be intimidated by too strong a dose of other people's triumphs. So...have things gone awry, amiss, out of joint? Does it appear that a pernicious virus infects your garage, that ill-savoured devils haunt your efforts? Unburden yourself, cast your woes upon the sturdy shoulders of your brethren, share with us your miseries. Good will come of it.

There is some soul of goodness in
things evil,
Would men observingly distil it out.

...King Henry V, Act 4, sc. 1

GATHERING UP THE FRAGMENTS

Gather up the fragments that remain, that nothing be lost.

...John. VI, 12

It is by now presumably apparent that your Editor is fond of quotations. Indeed, I'd probably sprinkle them more liberally through these pages if I could find more that seemed apt. Although I have from time to time been coy about where they come from, the truth is that quotations do not spring full-grown from my brain either. Chiefly, what springs is a sort of vague notion that something pithy, or sonorous, or amusing, or whatever, has been said that would fit neatly, or even dramatically, into a particular place. "Shakespeare," I think to myself, "had something witty to say about this." To find out, I reach for my now-well-thumbed copy of Bartlett's Familiar Quotations. This is a truly stupendous work, so crammed with well-turned phrases that I cannot imagine how anyone could have conceived and compiled it in a single lifetime. Sometimes I hit a good one, sometimes not.

There is a dark side of the whole quotation business. My gray cells can unaided bring forth few whole lines of Shakespeare, or whole stanzas of sonnets or odes, or complete and grammatical sentences in Latin; however, the cells can and do release

Back Cover

From an anonymous source in Europe, we acquired this remarkable photograph made some time in 1940. It was taken by Luftwaffe Captain Heinz-Dietrich Bettwäsche from the cockpit of his Ju 87 "Stuka" dive bomber, and later enlarged. The '38 Century is believed to be that owned by the Turkish Charge d' Affairs in Brussels, who was at the time of the photo attempting to make his way to safety in front of the advancing German forces. Hauptmann Bettwäsche sent the photograph home to his mother, with a letter explaining that he had not the heart to bomb so beautiful an "Amerikanische Auto -- ein Buick," and so photographed it instead just prior to pulling out of his dive. The letter is now extremely fragile and cannot be reproduced, but our sources have vouched for its authenticity. Although doubtless frightened by the event, the Turks are believed to have escaped to England. Hauptmann Bettwäsche had good fortune following his act of charity: he survived two ditchings in the Channel, was shot down four times, was captured by the Resistance twice and escaped once, and after the War became a successful insurance salesman. His death earlier this year brought the photo to light.

fragments: a phrase here, a line there, they buzz around my head like the mosquitoes that somehow get into one's bedroom but disappear when the light's turned on. Various events may trigger these releases, and some fragments are released over and over. Exempli gratia, upon stepping outdoors of a clear summer night and observing the rising moon, I am likely to say

> And haply the Queen Moon is on her throne,
> Cluster'd around by all her starry Fays.

Or if I sit on the patio in summer twilight, the close passage of one of those large night-flying insects may elicit "...save where the beetle wheels his droning flight." These outbursts, which often come to voice spontaneously and without forethought, once caused my wife to look beseechingly heavenward, but she is more accustomed now to eccentricities.

As with the mosquitoes, I am sometimes driven, with a single-mindedness of purpose, to track the beast to its lair if it has buzzed long and maddeningly enough: that is, to figure out where the fragment comes from and what its surrounding text may be. A few of the most-often-released I now can identify without research: thus, the Queen Moon bit I know is from John Keats' Ode to a Nightingale (stanza IV), and the beetle's droning flight from Grey's Elegy in a Country Churchyard. Frequently, however, I must look them up, and sometimes the same thing must be looked up over and over. Each spring, upon the blooming of my wife's peonies, I must again track "the wealth of globed peonies" to Keats' Ode on Melancholy.

I have been blown off course here by my own wind. I started out to say that several members have told me that they love the quotations. Moreover, it appears that some members' wives are equally taken with them, and indeed with my commentaries generally. This is gratifying, and leads me to discuss a perhaps more serious subject.

? IS THE TORQUE TUBE SEXIST? ?

It appears that my feminine readers are not uniformly without criticism of my work. It has been said that this publication is sexist. I must say that this never occurred to me before. Nevertheless, to the charge I plead nolo contendere. I suppose it is. (I also suppose that the same charge could be levelled against American Rifleman and Woman's Day.) It is not consciously intended to be, I can assure you. As I think back, however, I can recall a phrase or two that may have rankled: McLaughlin's "the little woman" in the last issue comes to mind.

Ladies, we will try to do better. The spouse (de facto or de jure) of any named member is, in my view, equally a member and welcome to participate, and to level charges and criticisms as well as praises. Indeed, I would like nothing more than commentary — printable or not — from my female readers. Let us hear from you.

Of this sad scene, Jeff Willey (#604; Centralia, WA) says: "On a vacation to Maui, Hawaii, I found this '38 sedan, with several 'No Trespassing' signs. The car is just north of Lahaina and can be seen from the main highway. I think it's beyond repair." I think so too, Jeff.

BCA NATIONAL MEET - BATAVIA, NEW YORK

This was a good — and interesting — event, and, all things considered, the Club was well represented. The interesting part was the introduction of the new BCA 400-point judging form and its application. The Editor's opinion is that the new system is -on paper — a considerable improvement, which has the potential to make BCA-event judging as good as any. Some "bugs" remain to be worked out, more experience needs to be gained with its use; and more judging expertise developed, but all of that was, in my view, to be expected. It was also to be expected that the new system would generate controversy, and it did. Over the next few months, I will try to develop some intelligent commentary on this subject, to be presented to BCA. Your comments are welcome, and will be incorporated into whatever I come up with.

Class C (1936-1939) was divided into three sub-classes: '36 and '37; '38; and '39, based upon the number of cars of each year registered. Each sub-class had its own team of judges, and prizes were awarded in each. Here's how Club members did:

Class C-1: 1936-1937

First: Guy Bennett (#161) - 1937 46-C
Third: Dave Brady (#720) - 1937 60-C

Class C-2: 1938

First: Paul Cusano (#52) - 1938 40-C
Second: Marv Rhynard (#327) - 1938 61
Third: Ed De Pouli (#310) - 1938 81
Pete Di Pasquale (#352) - 1938 81

Congratulations to all.

Your Editor had the honor — I guess it was an honor — to be appointed one of the Deputy Chief Judges, with responsibility for Classes C and D (1936-1941). Moreover, I had the good fortune to be teamed with Bonnie Franko, a pleasant and attractive lady who happens to be an AACA Master Judge. (John Huffman (#623) was Team Captain for C-1 and his team included John Steed (#132)). The Deputies' function was to resolve difficult questions of authenticity — or indeed any difficult questions — and check the work of the judging teams. We resolved the questions; there weren't very many. We then had the job, when judging was completed, of picking the one best car out of the two Classes, as a candidate for Best of Show. That was not easy, but we did it. Although there were a few inexperienced judges, I believe that all '36 - '41 cars were judged competently and fairly. Not every owner was happy, but I rather think that the first judged meet involving 400+ cars from which each owner goes away happy and satisfied will occur immediately before, or contemporaneously with, the sounding of the Last Trumpet.

The Club held its "Annual Meeting" on Friday evening at the BCA National. A couple dozen members, and a few prospective members, showed up, and we chattered about various things. No Great Decisions were made, but we did identify a few subjects that a few members agreed to look into. The results of this looking will be published in due course.

In addition to all of that, the Batavia Daily News printed a photo of Ed De Pouli washing his Roadmaster, and the Rochester Democrat & Chronicle a photo of three '38s (probably De Pouli, Di Pasquale and Rhynard), unfortunately sans owners. The Daily News reporter spelled Ed's name right, got '38 Roadmaster right, and even got his home town right (Demarest, New Jersey). Bravo!

MEMBERSHIP RENEWAL TIME

Whaddaya know, its membership renewal time again. You will — I hope — remember that all memberships expire on August 31. (All means every cotton-pickin' one.) However, not all will expire this August 31, since some people have joined for two or three years. Some have already renewed without prompting. The year in which your membership expires is indicated on the address label on the envelope in which this issue was mailed. Fish that envelope out of the trash right now, so you can see where you stand.

This year I am mailing (or have already mailed) a renewal notice in a separate envelope to those whose memberships expire August 31, 1989. Having tried it both ways, I have concluded that a separate notice (as distinguished from one included with this issue) is better: it looks more like a bill and people tend: (a) not to lose it; and (b) to pay it.

I am also mailing (or have mailed) to each member a new "Application/Roster Information" Form.

EACH OF YOU, PLEASE FILL OUT AND RETURN THE ROSTER INFO FORM, WHETHER YOUR MEMBERSHIP HAS EXPIRED OR NOT.

Each year I go through the same song and dance. The forms will be the "data base" for the 1990 Roster. If you do not fill it out and return it, you may well not be in the Roster, because I may well not feel like filling it out for you or copying your old form. After all, why should I do this work for you? If you can't devote five minutes of effort and one 25¢ stamp to the Club, you don't deserve a whole lot of help from me.

Why do all memberships have a common expiration date? Easy. It's much less work for me. The less time I spend on administrative matters, the more I can spend on the content of this publication. Why is it August 31? At this point I'm damned if I know — it's always been that way, and it will stay that way.

The dues will be the same as last year. Although I have yet to make my annual close inspection of the treasury and the past 12 months' operation, I can say that our financial position looks good. Primarily because of the steady addition of new members, we have gained some economy of scale, and it is now feasible for me to pay the printer to stuff, stamp and seal the envelopes, a task that formerly occupied me some 35-40 evenings per year, and which I found, if not disagreeable, at least not terribly rewarding. (The only rewarding part was getting it finished, which reminds one of the old joke about the man who hit himself with a hammer.)

I conclude this month's administrative droning with the following message:

MOST MAGAZINES CARRY YOU FOR SEVERAL ISSUES AFTER YOUR SUBSCRIPTION RUNS OUT.

THIS ONE DOESN'T.

NO PAY, NO TORQUE TUBE. GOT IT?

— Bill

Following Pages:

Summer Shows

NOTE TO ALL BCA NATIONAL AND B.O.O.M. SHOW ATTENDEES: I had many photos of both events, and selected those reproduced herein primarily on the quality of the photos. If you're not pictured in this issue, it is not because the Editor doesn't like you.

BUICK OWNERS OF MARYLAND SHOW -- JUNE 3, 1989

Photos by Charles Jekofsky (#524)

Lamp Time! 1938 Centuries owned by David Bylsma (#117), Hanover, MD (model 66-C), Russell Snyder (#618), New Carrollton, MD (model 61), and Charles Jekofsky (#524), Washington, D.C. (model 61)

1938 Limited -- George Cranford (#202), Riverdale, MD

Peter Economos (#733), Rohoboth, DE and his 1937 Century convertible.

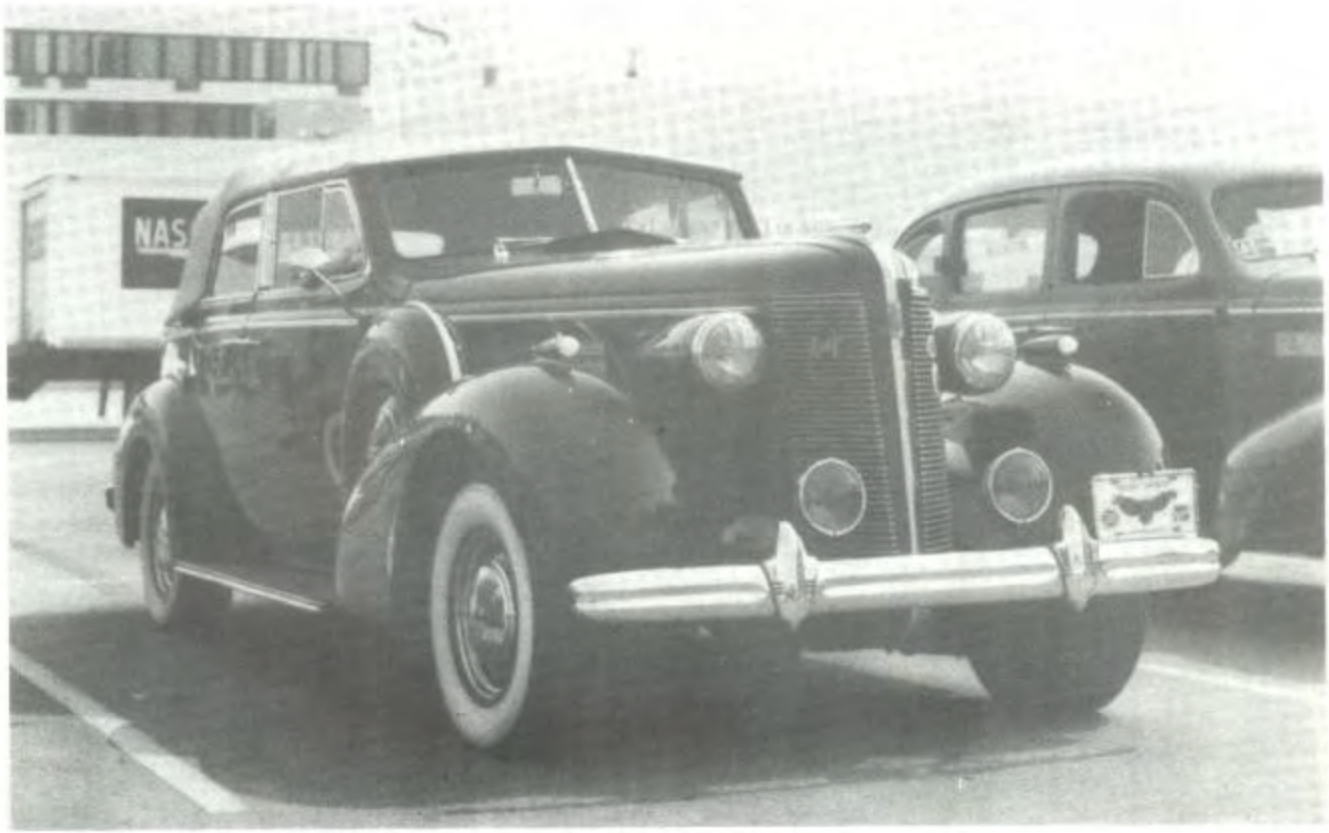
Prize winners (L-R) David Bylsma (1st), Lester Stephenson (#19) (2nd), and Peter Economos (3rd), in 1937-38 Class.

BCA NATIONAL MEET - JULY 6-9, 1989

Photos by the Editor

Paul Cusano (#52), Hasbrouck Heights, NJ preparing his 1938 model 40-C for Saturday's judging. Paul, a psychiatrist who admits to "obsessive compulsive" behavior when it comes to the car, spent the better part of two days thus engaged.

Rear view of 1937 Century owned by Al Anderson (#723) of Lakewood, NJ shows sport coupe body's rakish rear.



1937 Century convertible sedan (model 60-C) -- Dave Brady (#720), Emmaus, PA (See also front cover.)

1938 Century sedan (model 61) -- Marv Rhynard (#327), Lansing, MI

Del Carpenter (#620), Rockford, MI at his swap space as customers look over the merchandise. Del sells "Del's Decals."

PAINT: A Bit of History

The following excerpt from a 1940 book was sent in by Tom Gentile (#130). The book is Lacquer and Synthetic Enamel Finishes authored by Ray C. Martin, a research and development chemist, and published by D. Van Nostrand Co., Inc. of New York. At 49 years of age, this obviously is not a "how-to-do-it" on modern finishes and techniques; nevertheless I think it's interesting and informative, especially for those of us interested in the history of automotive manufacture and technology. The excerpt is Chapter 13 of the book, "Motor Car Finishing" plus a few entries from the book's "Glossary." If nothing else, it shows us how far in 1940 automotive finishing had advanced beyond the 1920's, and how much farther it has advanced since 1940.

Tom came into possession of the book in a rather unusual way. Those of you who visit furniture stores (something I try to do only when absolutely necessary) may have observed that the proprietors like to display bookcases, wall units, and the like with a few books, knick-knacks, and objects d'art on them. The books are presumably chosen for "looks" rather than content. Furniture dealers being typically sharp businessmen with an eye to the maximization of revenue and minimization of expense, such books are likely to be publisher's remainders or cast-offs from the public library. Tom and his wife went to a furniture store. "I happened to see the book as we were browsing," he says, "and the store owner thought it unique that I would make such a lucky find among his display props." Tom and his wife having made a substantial purchase, the owner (who probably had about 10 cents invested in the book) was generous enough to throw it into the deal.

The whole book, according to Tom, is about 500 pages, and covers every phase of professional lacquer and enamel finishing and refinishing. Tom's book review is favorable: "It explains in great technical, yet understandable, detail the history of this type of finishing, especially nitrocellulose lacquer and its application. This had to be some sort of 'bible' for the trade 49 years ago."

Regrettably, I was not able to get decent reproduction of the illustrations accompanying the text, and have omitted them. They are photos of workers on a mid-1930s assembly line engaged in sanding, spraying, etc. I could not positively identify the body shells being worked on; they appear to be Hudsons, and they're definitely not Buicks. The most interesting things about the pictures, to both Tom and me, are these: one shows two female workers, one of whom is clad in a dress -- maybe an inspector; another shows "flash primer" being sprayed by a man wearing a boiled shirt, a vest, and a tie -- an inducement to careful work if nothing else.

Our thanks to Tom -- and the furniture dealer -- for this "find." I hope you'll find it interesting history.

CHAPTER XIII

MOTOR CAR FINISHING

While lacquer finishes were first used in production on automobile surfaces in 1923, today practically every manufacturer of motor cars uses lacquer in one or more processes of finishing.

A large part of the production of lacquers in the United States is absorbed by the automotive industry. Illustrating the growth of the lacquer industry since 1923, it is noted that in 1924 there were produced 3,590,000 gallons of automobile lacquer; in 1925, 11,000,000 gallons; in 1926, 22,000,000 gallons; in 1927, 30,000,000 gallons, while in 1928 no less than 47,500,000 gallons were produced.

The contribution of lacquer finishes as a solution to the problems of body building is emphasized to an increasing extent in working out improvements and refinements. Seventeen years ago when motor car manufacturers first seriously investigated nitrocellulose finishes and adopted them, such difficulties as odor, mechanical application, etc., encountered in actual application, almost condemned them before they could become a proven product. The quick drying feature of lacquer, as compared with the lengthy, drawn-out schedule involved in coating with color varnish, was perhaps the outstanding reason for the desire of further investigation.

Nitrocellulose lacquers had been used to a limited extent in the metal industry prior to 1923 and in view of their use, were considered quite adaptable. These products were used mostly as a protective coating on polished metallic surfaces where expansion and contraction of the film and such characteristics as may influence durability were not considered. With the knowledge of the limitations of raw materials of that day, manufacturers of these basic ingredients set about to develop and improve new raw materials which laid the foundation of the present type of automotive lacquer finishes.

In the logical development of raw materials, synthetic resinous compounds came into being. Gum resins of fossil nature were used in the early type of lacquers to produce adhesion, gloss and add "body" or solids on the work. Such manufactured lacquers were of limited durability. With the perfection of synthetic resins as regards compatibility with nitrocellulose, fossil gum resins were replaced and the durability of automotive lacquers markedly increased. Lacquers which involved fossil gum resins were only subjected to very low "heat treatments" in order to hasten evaporation. Automotive lacquer formulation today contains large amounts of synthetic resins (6 to 8 to 1 of nitrocellulose) which permits of a much higher "heat treatment" and which has a direct bearing on the durability phase.

Synthetic enamels which require baking temperatures of 250°F to 300°F are used in automotive finishes today. The trend is definitely toward a baked synthetic finish.

Preparation of the Surface for Lacquering

The ineffective cleaning and preparation of the surface to receive lacquer applications is said to be responsible for 90 per cent of lacquer faults and failures. In the earlier days with no cleaning, or rather inadequate and imperfect cleaning, coating failures were frequently encountered; so much so that the future of the steel body was despaired of. Perhaps the most serious offender was rust.

The preparation of the metal is regarded as a cleaning operation. It is important that all rust, scale, grease and foreign material of all kinds be thoroughly removed before coating applications are applied.

(See FAULTS AND CORRECTIONS, Part III, Chapter X.)

As the auto bodies, in their course "down the production line," are received from the stamping assembly, the following operations are involved, preliminary to the coating applications:

(1) Hand brushed with a solvent cleaner to cut the heavy grease. (See illustration No. 87.)

(2) A warm spray follows the hand brushing which warms the metal so the chemical cleaner will work more effectively.

(3) Chemical cleaner wash, such as deoxidine, is next applied by fixed spray application directed under high pressure. The chemical solution is collected and reclaimed.

(4) The next application involves a cold water rinse to neutralize any of the chemical cleaner that may remain.

(5) A hot water spray is next and, after emerging from this operation, the bodies are blown with air under high pressure. (See illustration No. 88.)

(6) The bodies are then routed through a drying oven (temperature of 200°F) to insure the thorough removal of moisture.

(7) Emerging from this operation and, after gaining room temperature, the bodies are wiped with alcohol saturated cloths. (See illustration No. 89.) The surface is considered chemically clean and ready to receive coating applications at this point.

As the sheet metal parts, namely: hoods, fenders, etc., are received from the stamping department, they are hand scoured and then passed through a washing and drying machine which involves the use of a chemical cleaner. An oven is a part of the washing machine and after passing through the washing operation, these parts are passed into the oven — on a conveyor — at 500°F. Leaving the oven, they pass through a cooling tunnel. Out of the tunnel, they are inspected and all remaining traces of grease and rust are hand cleaned and sanded (with wire brush if necessary) with a solvent cleaner.

Assurance that the surface is thoroughly clean is unquestionably of great importance, as well as the prevention of rusting after lacquers have been applied. For this reason, the chemical cleaner employed should be effective and remove all visible particles which may develop into rust formations at a later date.

Undercoats: Primers — Surfacers

The primer and surfacer operations follow immediately after operation No. 7 above. This is a very important operation of motor car finishing and on this foundation coating, rests the responsibility as regards durability of succeeding lacquer finishes. The selection of such undercoatings indicates the use of materials which will expand and contract. High-bake oil-type and synthetic (oil modified alkyds) pigmented primers are used.

A coat of flash primer is applied by spray over the entire body surface. (See illustration No. 90.) This operation is enacted in a water wash spray booth as described in Part IV, Chapter XI, and the spray residue is recovered and reclaimed. This primer coat is of the quick setting type and is followed by a spray coating or surfacer. After the surfacer application, the body is routed through a baking oven and baked at temperatures ranging from 180°F to 220°F for periods of two to four hours. The bodies, after retaining room temperature, are inspected for scratches, dents, etc. (See illustration No. 91.) The defects are chalk marked, the body is removed from the line and repairs are made. The second coat of surfacer is applied (see illustration No. 92) and the bodies are baked at 200°F for two hours. Following this baking, the bodies are carefully inspected and spot glazing is applied if the condition of the surface warrants such an operation.

(See illustration No. 93.) Spot glaze applications are baked on the surfacer schedule. The next operation is the wet sanding of the surfacer; 280 wet or dry sandpaper is used and water is the lubricant. (See illustration No. 94.) Following the wet sanding, the body is flushed with water and wiped clean with a sponge. The bodies are then passed through an oven at 200°F for one hour in order to remove the last traces of any water that may be present. Bodies are then tack-ragged to remove any dust and are then ready for lacquer enamel applications.

Bonderizing

This is a process whereby steel parts are passed through a water solution of manganese and iron phosphates at 210°F. Bonderizing is usually applied to sheet metal parts: hoods, fenders, etc. As mentioned earlier, these parts are thoroughly cleaned before bonderizing, which is customarily applied by the dipping process. The parts are placed on an overhead conveyor line, passed into the bonderizing tank and then through a baking oven at 450°F to 500°F. Out of the oven they are conveyed to an enameling tank where the enamel coating is applied by dipping (especially in the case of fenders). Two coats are customarily applied.

Lacquer Finishing Coats

As the bodies enter the spraying tunnel, lacquer enamel is applied. Four spray men are located in this booth and the first two men each spray one half of the body as it passes. The second two men, who are located about 30 or 40 feet in the tunnel, each spray one half of the body as it passes. This double application constitutes the first application. A typical lacquer finishing booth is illustrated. (See illustration No. 95.) After this first coat of lacquer, the body passes on down the line where it is permitted to air-dry (as it travels on the line) and a second coat is applied. This is a duplication of the first application (that is, it is a single over-all application). The body then passes on for a period of ten minutes at which point it receives the third application (similar to the second application). The bodies are then placed in a drying oven, where they are force-dried for about thirty minutes; temperature being 180°F to 200°F. After the bodies have maintained room temperature after force-drying, the inside of the body is sealed with waterproof compound and the bodies are passed on to be sanded and polished. In sanding the dried lacquer coats, Nos. 320-400 wet or dry sandpaper is used and water or soap solution as a lubricant. (See illustration No. 96.) Strong mercury vapor lamps are used in this operation to provide good illumination. Following the hand sanding, the body is sponge rinsed with cold water and then blown with air to remove any water. The bodies are then polished, using standard preparations. Flexible polishing wheels employing sheepskin discs are used. After polishing, tack rags are passed over the surface to remove any dust and the final operation of striping is applied. (See illustration No. 97.) Following the striping operation, the body is inspected and if found satisfactory, is passed on to the assembly line.

The operations which would have been enacted in 1927 are as follows:

(1) Clean metal.
(2) Dry sand.
(3) Wash with lacquer thinner.
(4) Moldings torched with a blow torch.
(5) Bake at 180°F for twenty minutes.
(6) Apply primer (oil type) and bake at 180°F for four and one half hours.
(7) Apply spot putty.
(8) Apply spot glaze coat.
(9) Bake at 180°F for two hours.
(10) Spray surfacer (oil type).
(11) Bake at 180°F for two hours.
(12) Spray a light sanding guide coat.
(13) Bake at 180°F for two hours.
(14) Sand.
(15) Inspect.
(16) Apply spot putty.
(17) Bake at 180°F for fifteen minutes.
(18) Sand.
(19) Tack rag.
(20) Apply ground color coat in Japan.
(21) Bake at 180°F for two hours.
(22) Sand lightly.
(23) Tack rag.
(24) Apply two single coats of lacquer.
(25) Force-dry for fifteen minutes at 130°F.
(26) Apply two single coats of lacquer.
(27) Force-dry for thirty minutes at 130°F.
(28) Water sand.
(29) Blow dry with air and force-dry for fifteen minutes at 130°F.
(30) Tack rag.
(31) Polish.
(32) Stripe.

Lacquer Circulating System

Lacquer handling costs have been reduced and output increased by handling large volume finishing operations through the circulating system for spray finishing materials. The delivery of clean, fresh, uniformly mixed materials through pipe lines to the spray guns makes for better working conditions. It eliminates the trucking of lacquer through the plant, prevents any mess around spray booths, makes possible a greater degree of plant cleanliness and reduces the fire hazard. There are no containers to clutter up the booth or to be cleaned and refilled. Finishing material is delivered to spray guns at a uniform pressure, insuring even application in the proper thickness by each spray operator, thus lessening sanding and polishing operations.

Each pipe line carries a different color or kind of material. The finishing material for the paint supply lines is put into mixing tanks and thoroughly mixed by a motor driven agitator. It is then drawn from the tanks through pumps, strained and is circulated constantly from the mixing room direct to spray operators and returned to the mixing room. Regulated paint (lacquer) outlets are provided at the various spraying locations. (See illustration No. 99.)

In the manufacture of lacquer enamels for outdoor use, all raw materials should be selected with the greatest of care. Solvents and plasticisers should be chemically pure, resins should be proportioned in consideration of the great degree of expansion and contraction to which the steel body is subjected (flexibility is desired), and pigment matter should be carefully considered in view of fading, etc. In the

manufacture, the ratio of pigment to vehicle should be considered and pigment properly dispersed and clarified before it is filled into containers. Care should be given the reduction of such enamels and only thinners which are compatible should be employed.

There are numerous motor car difficulties which are described under FAULTS AND CORRECTIONS.

Bus Finishing

The present trend in bus, truck, and street car construction involves lightweight metals. Aluminum and its alloys are employed to a large extent. The use of such metals created new finishing problems, such as finish ruptures at the rivet heads and joints. This exposure of the metal caused aluminum oxide to form, pitting of the metal, and rusting. High solids synthetic lacquer is used and will withstand vibration stresses set up by the weaving action of the bus or street car. Such a lacquer film, in addition to containing high solids, will retain its lustre over a longer period, will give increased coverage per gallon over conventional lacquers and will withstand temperature changes more readily.

The aluminum or its alloy should be treated with an acid etching, (deoxidine) washed with hot water to thoroughly free the acid, washed with lacquer cleaner, blown with air and *immediately followed by a primer coating.*

A zinc chromate synthetic primer is used and sprayed very lightly over the entire surface. The metal should in no case be completely covered by this yellow coating. This primer coat is air-dried for six to eight hours and followed by the surfacer coat. Two coats are applied in one continuous operation and air-dried for six to eight hours, at which time it is water sanded. Following this, air is blown over the entire surface to remove lasting traces of water. A light coat of synthetic lacquer is next applied and followed by a full wet coat. The third and final coat is also applied as a full wet coat. A mist coat may then be applied over the lacquer or it may be rubbed and polished.

Synthetic enamels may be substituted in this system for the synthetic lacquer. Except for the substitution, all materials and procedures are identical. Whichever system is used, the greatest of care should be exercised between the final cleaning and application of the chromate primer. Handling and finger marks should be avoided.

Flow-Coating Lacquers

The use of floco-lacquers in automotive establishments has been attempted but has met with little success. Their use has been retarded due to their rapid evaporation, as well as the biting action of the solvent structure on the previous coatings. The synthetic lacquer or synthetic enamel systems as coatings show great possibilities. Such systems which will remain "wet" longer, permit heat treating or baking, and in the event sagging occurs, may be sanded and rebaked whereby the sand markings will blend together.

Refinishing Motor Car Surfaces

Refinish jobs are classified as:

(1) Burn-off and refinish.
(2) Resurface and refinish.
(3) Refinish without surfacing.
(4) Quick touch up and refinish.

The first type, "burn-off and refinish jobs," is the highest quality. This consists of completely removing all traces of the old finish down to the metal. The car is placed on a cleaning rack where dirt, grease, etc., are freed from the surface. Steam and solvent solutions (patented process), paint and varnish or baked enamel removers may be used. Any wax remaining on the surface should be cleaned with lacquer cleaner. Air drying undercoats (primer and/or surfacer) are customarily used or these coatings may be baked. If air-dried, at least twenty-four hours should be required. The finishing procedure is much the same as described above.

A resurface and refinish job is steam cleaned and sanded with gasoline. A combination primer and surfacer is applied and air-dried for twenty-four hours. The job is sanded and synthetic lacquer is applied, rubbed, and polished.

Refinishing without surfacing involves a job in which the surface lacquer is in good condition, but the color may have faded, etc. Any slight surface imperfections are glazed, sanded and synthetic lacquer is applied to a finish.

A quick touch-up and refinish job is much the same as refinishing without surfacing, except that a minimum number of lacquer coats is applied.

Lighting Facilities

In order to secure a satisfactory finish, it is essential that all surface defects be made visible to the workman. It has now been well established that increased acuity gives quicker light, and sharpness of vision depends upon brightness and the kind of light. The light which enables the workman to turn out the most work will enable him to turn out the best work. Lighting is therefore an important item in automobile finishing where manufacturing conditions require a steady production flow. High intensity illumination utilizes every square foot of floor area for protection.

We see with the mind, therefore, the relationship of the quality of light to the defects of the eye lens, having bearing on the manner in which the particular spectrum of the light corrects the chromatic aberration of the eye produced by continuous spectra light, also has great bearing on the workman's ability to turn out the best work under very satisfactory conditions. All light from glowing solids is termed incandescent light, while the light emitted from glowing gases or vapors is termed luminescent light.

The light of luminescent mercury greatly reduces the range of wave length found in incandescent light, and stills the mind through the eye by bending the rays of light and producing an image of perfect sharpness. Mercury light is the nearest approach to "cold light" produced. True daylight, or that period about one-half hour after sunrise to several hours after sunset is quite naturally the best light, producing ideal working conditions from a lighting standpoint. Such conditions as weather elements and indoor work should be considered. The constant intensity at any hour of the day of the Cooper-Hewitt light is therefore considered better than daylight. It is composed almost entirely of yellow-green (the best seeing rays of light), and has none of the glare-producing qualities which are irritating to the eyes.

The light unit comprises a fifty-inch glass tube containing a small amount of mercury, which under the action of electricity, vaporizes a small portion of this mercury which becomes luminous and develops a light free of red rays and a light of high visual acuity. This tube is covered with a metal reflector coated with white enamel. This reflector extends below the tube which reflects the light downward. Auxiliary containing coils and mercury switch are centrally located on the reflector and likewise serve as a support for both reflector and tube.

FLOW COAT. Either a coat applied by the flow-coating process or the final coating applied to a surface in a very free manner which will permit the material to flow freely.

FLOW COATING. The process of applying finishing materials with a flowing machine, by which the product is flowed from a hose-like arrangement and the excess is allowed to run off into drip pans.

FOSSIL GUM RESINS. Fossil gums are the so-called "copals" or "hard gums" which were exuded from living plants centuries ago in the form of liquids or semi-solids, which have lain in the ground for centuries and thus hardened or fossilized with time. Some of the fossil gum resins are: Amber, Zanzibar, Kauri, Manila, Pontianak and Congo. See *Gum Resins*.

NEW MEMBERS

John Dieterly (#768)
400 W. Mt.Carmel Ave.
Glenside, PA 19038
215/572-9979
'38 41

N.Z. Buick Enthusiasts
26 Dunraven Place
Torbay
Auckland 10
NEW ZEALAND

Hans Egger (#770)
1425 N.W. 48th St.
Vancouver, WA 98663
206/693-4139

C.J.Lussky (#771)
39 W570 Big Timber
Elgin, IL 60123
312/888-3170
'38 41

Russell C. Coyne (#772)
800 Riverview Square-103
Brielle, NJ 08730
201/741-0273
'38 61

Russell A. Ische (#773)
RR# 5
Stratford, Ont. N5A 6S6
CANADA
519/393-6468
'37 4619 McL.

Paul A. Clark (#774)
1695 Three Lakes Dr.
Troy, MI 48098
313/879-6977
'37 41

NEW ADDRESS

Paul Burbine (#743)
8 Myrtle Ave.
Wakefield, MA 01880

OLD MEMBERS RE-JOIN

Robert L. James (#371)
p.o.box 531
Whitby, Ont. L1N 5V3
CANADA

Joe Giordano (#333)
131 N. Stewart Rd.
Liberty, MO 64068

1937 HOOD PROP

Dave Brady (#720) showed me a neat gadget at Batavia. Attached to the rods that connect the nose piece to the firewall, on either side of the engine compartment of his '37 60-C, were two folding metal props that he uses to hold the hood open, instead of resting it on the cowl. They have big rubber bumpers on the ends of the prop rods, and work nicely. The degree of opening is controlled by where you place them on the rods. These are reproduction parts made for early '50s Dodge trucks, and may be obtained from Roberts Motor Parts, 17 Prospect Street, West Newbury, MA 01985. 508/363-5407. (Catalog is $4.00.)

LACQUER. The term "lacquer" has been so abused that it is no longer possible to know exactly what type of material is being referred to without additional explanation at the time of using the term. Originally the term referred to quick drying thin bodied materials of all kinds, later it was applied to very thin oil varnishes, with or without color, which dried quickly; then to very quick drying spirit varnishes containing alcohol, benzol, acetone, amyl acetate and other quick evaporating solvents, with or without nitrocellulose, in combination with various gum resins. Later the term has been applied almost exclusively to spirit varnishes containing nitrocellulose, with or without gum resins in solution. It is best for clearness to refer to thin bodied varnish lacquers as "spirit varnishes" or "shellac substitutes" and to solutions containing appreciable amounts of nitrocellulose as "nitrocellulose lacquers."

LACQUER COLORS. Pigment colors ground in a compatible lacquer base which are intermixed with clear lacquer vehicles to an enamel finish.

LACQUER ENAMEL. A clear lacquer vehicle to which has been added pigment matter.

LACQUER OVER OLD FINISHES. In recoating, if and when lacquer is applied over an aged finish, it usually is a source of trouble. It is a good policy to either remove the aged finish or seal before lacquering.

LACQUER OVER OTHER FINISHES. A common source of trouble, especially lacquer over varnish.

NITROCELLULOSE. The product obtained by subjecting cellulose to a treatment with a mixture of nitric acid and sulphuric acids, which nitrates the cotton linters. Ordinary raw cotton or the "linters" from around the seeds are most frequently used for making nitrocellulose. For different purposes the cotton is nitrated in different degrees but for use in lacquers, nitrocellulose of about 12 per cent nitrogen content has been found most adaptable.

PLASTICISER. Usually high boiling solvents added to lacquers to increase the elasticity and flexibility of the dried film. Also sometimes spoken of as "softeners."

A substance which lowers the consistency of a mixture. Some substances are of too high a consistency to act as colloidal solvents even though they are also to disperse the colloids. Thus camphor converts nitrocellulose into a plastic mass rather than a colloidal solution. It is therefore known as a plasticiser. (Journal of Rheology.)

SURFACER. Any finishing material which is used to build up a surface or to aid in producing a smoother surface may be called a surfacer, although the name applies more particularly to products such as sanding surfacer, rough stuff, intermediate sealers, glazing putty, etc. Surfacers of this type usually contain considerable amounts of pigment to give good filling properties and after being dried and sanded are rubbed to a smooth surface before succeeding coats are applied. Paint surfacers usually are force dried.

With the advent of lacquer enamels it was necessary to develop a paint surfacer that was not readily affected by the lacquer solvents. This has been done remarkably well and such sanding surfacers are now commercially available – surfacers which may be recoated each five hours, water sanded in five hours after the last coat and coated with lacquer enamel within an hour or so after rubbing. This speeds up the schedule to a great extent. In motor car production such products are force dried or baked.

Lacquer surfacers are available which may be recoated each half hour and water sanded after the last coat has remained overnight. Some of these are very durable but none fill the imperfections in the metal quite as well as the paint surfacer or rough stuff and they are usually tougher to sand. For use under lacquer enamels on metal that is not too heavily file marked, they have a very important place.

Engine Rebuilding - Part 10
Valves

By PAUL B. CULP, Jr.

All engines convert one form of energy into another. Internal combustion engines convert the chemical energy stored in their fuels into heat energy during the burning part of their operating cycle. The heat energy is converted into mechanical energy by the expansion of gases against the pistons attached to crankshafts that can rotate. In order that the operation be continuous, this series of events must be repeated over and over again in regular order. These repeating events comprise the "cycle" of the engine. The Buick powerplant and practically all gasoline and diesel engines are based upon the "Otto" principle. The principle embodied in the four-stroke engine (intake, compression, power and exhaust) dates back to a patent awarded in 1866 to German engineer Nikolaus August Otto. Once Otto's invention was adapted to commercial use, the world was changed forever.

This type of engine in order to complete one "cycle" must accomplish two revolutions of the crankshaft and four "strokes" of the piston--two down and two up--all the while breathing through its valves in the appropriate sequence. (The "four-stroke" engine is often called "four-cycle," but this terminology is really not too accurate: four "strokes" of the piston comprise one "cycle.") The valves in the Buick engine, and virtually all other four-stroke auto engines, are of the "poppet" type. (One exception that comes to mind is the Knight sleeve-valve engine, used in the Willys-Knight and the Stearns-Knight.) Webster defines "poppet" as "a valve that moves up out of and down into its port, often used for regularly interrupted flow, as in a gasoline engine."

I expect we all know the basic function of valves. Fuel is admitted to the engine by the intake valves and the burned gases escape through the exhaust valves. Valves must also seal the combustion space tightly when closed or loss of compression will result.

In the Buick valve-in-head mechanism the arrangement consists of valve, valve-stem guide, valve springs, valve-spring seat, rocker arm, valve-adjusting nut, push rod, valve lifter and valve lifter guide. The mechanism is activated by the lobes of the camshaft, chain driven at half the speed of the crankshaft.

Each cam lobe moves a lifter upwards until it is raised to its maximum at the apex of the lobe. This in turn causes the push rod to move upwards. The rocker arm translates this into downward motion of the valve--i.e., it moves from its seat down into the combustion chamber, uncovering its port in the head and permitting gas to flow past the valve into or out of the chamber. As the valve is opened, it springs are compressed. When the cam lobe has rotated past the point where its apex is directly under the lifter, the springs, expanding

back to their uncompressed length, will move the rocker arm in the opposite direction, causing the push rod to move downward again, following the cam lobe to its low point. At the same time the springs will close the valve.

Valve springs are necessary to bring each valve to a closed position after it has been opened by the action of the push rod and rocker arm. Springs are made of high carbon alloy steel, treated for maximum resiliency. A problem of single springs is resonance and valve "float." At an engine speed of 3000 RPM each valve in each cylinder must open and close 25 times per second. At such speeds a single spring will tend to resonate rather than expanding and contracting precisely and the valves will hang open or "float." By using two springs, a smaller spring inside a larger one, the two different frequencies of the vibration will tend to cancel each other, minimizing resonance and the possibility of spring breakage.

In the article on Cylinder Heads we observed that seating of the valves (i.e., the manner in which they mate with and close against the ports in the head) is important. Improper seating, resulting in even a small leakage of gases past a closed valve, will cause uneven heating across the valve face, distortion and eventual failure. This is shown in the diagram.

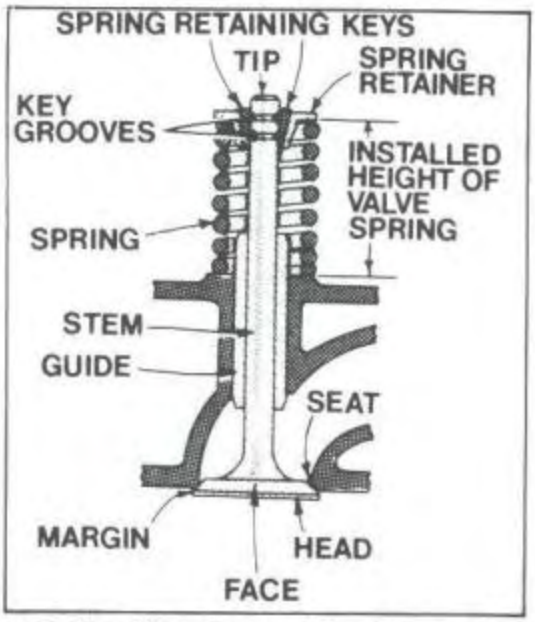


Figure 3 The different parts of the valve are shown in this cross section of a cylinder head

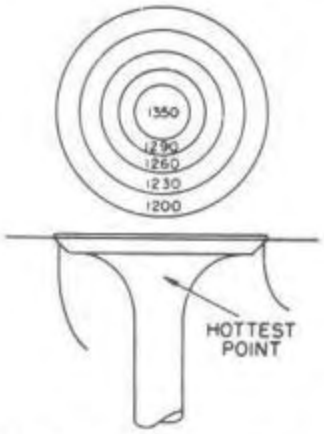


Figure 4 Exhaust valve at normal temperature. Note that it is hottest at the center

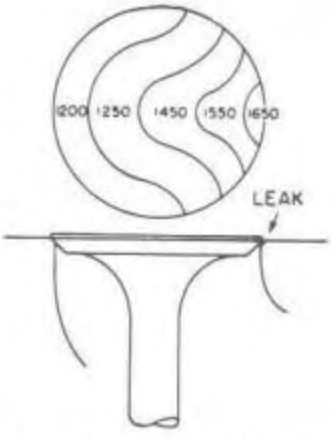
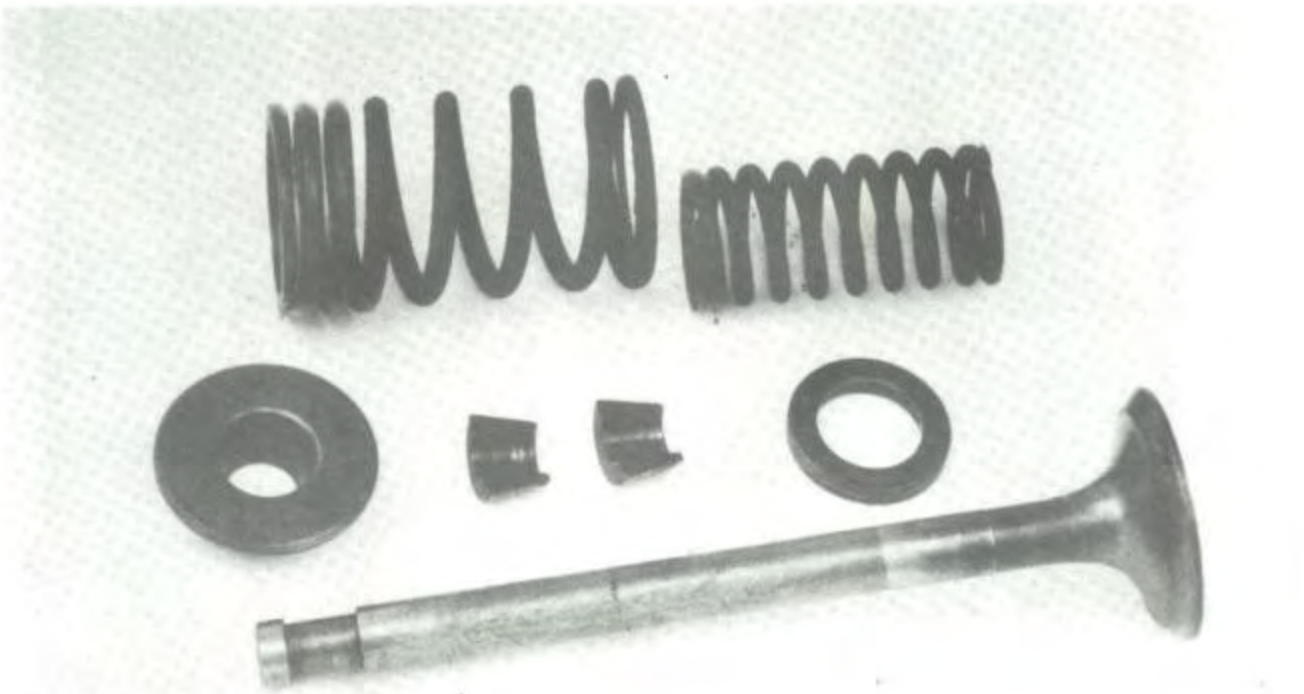


Figure 5 How slight valve leakage causes a marked increase in temperature

Intake (back row) and exhaust valves as removed from head (left), cleaned up with wire brushing and a light grind to reveal wear pattern (center), and with resurfacing completed (right).



Disassembled view of exhaust valve, springs, and retainer with split two-part collett (intake valve parts are identical except for size of valve head).

The straight-eight Buick intake valves are produced of nickel-chromium steel and are approximately 50% larger in head diameter than the exhaust valves. This layout permits easy breathing when the intake or suction stroke begins. The smaller exhaust valves are produced of silichrome steel, a special alloy high in silicon and chromium with unusual resistance to heat. They pass the hot gases escaping through the exhaust manifold and pipes into the atmosphere via the force of the piston's exhaust stroke. Theoretically, the diameter of the valves should be at the maximum that sound engineering can provide, consistent with maintaining structure strength in the head. The volumetric difference between intake and exhaust will always yield the larger area to the intake valve, in order to get the fresh air/fuel mixture into the cylinder as quickly as possible.

In the previous article on Cylinder Heads, we observed that the '37 and '38 Buick engines have cast iron valve seats which are integral with the head. Modern engines have hardened alloy steel or stellite valve seats pressed into the head (which may be cast iron or aluminum) to reduce wear, prevent leakage, and minimize the need for "valve jobs." Modern seats may be installed in a straight-8 head if the originals are badly worn, or if you plan to do a lot of high speed driving.

In the rebuilding of engine components, the valve job is perhaps the most often performed operation. If care is applied and a basic knowledge of valve function is considered, the result of the endeavor should be most satisfactory. The fundamental compression test is made to determine engine condition.

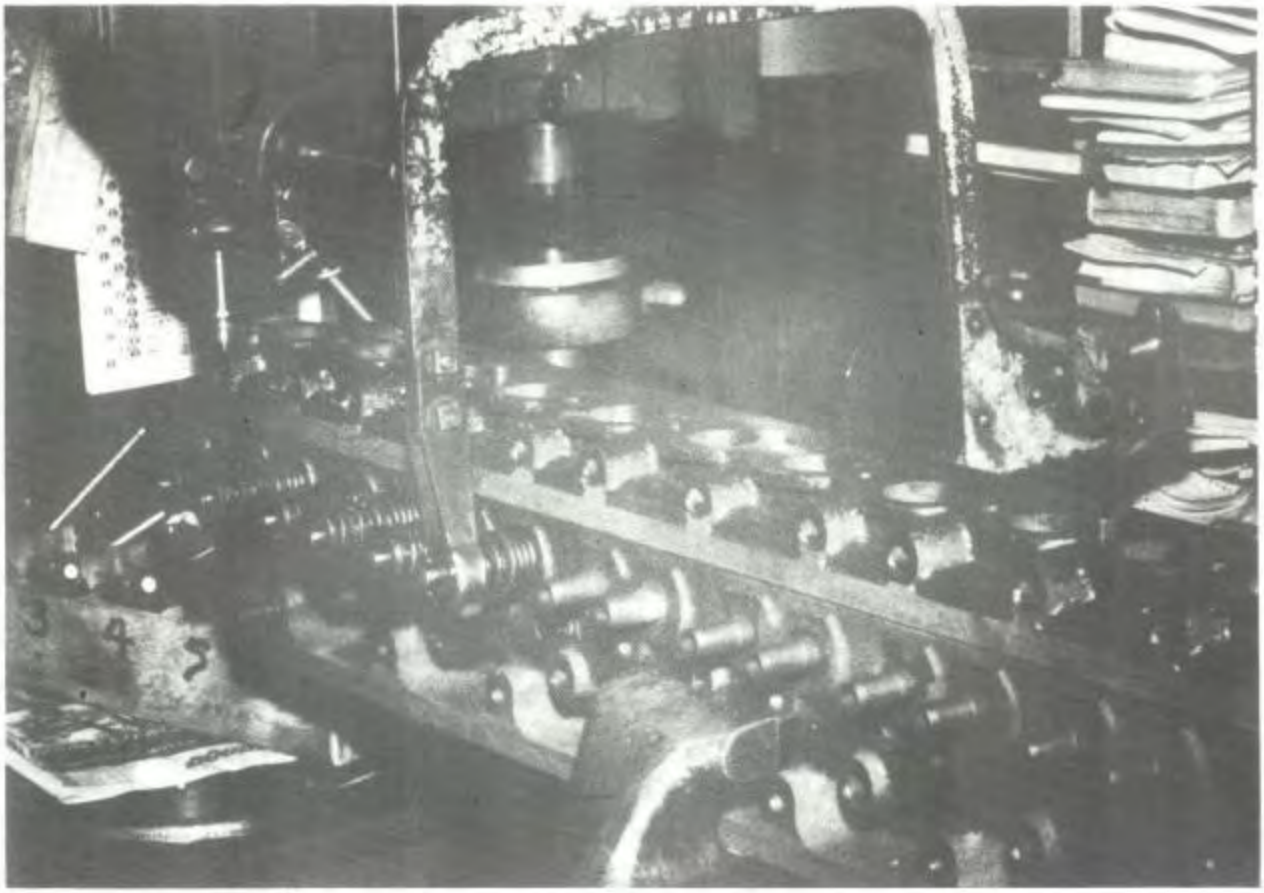
Initial cleaning with a wire wheel in a bench grinder.

Compression testing and use of an engine vacuum tester can identify many problem areas. Follow the instructions supplied with the test kit to assist you in your diagnosis. Compression tests in the "dry" and "wet" modes are made at cranking speed and the results are recorded for reference. The large series engine, in good condition, will test out at approximately 115 psi "dry." Adding a few tablespoons of motor oil per cylinder may increase the reading slightly. If the rings are at fault, the test will read higher. Alternately, if there is no change in a low compression reading, the valves are probably at fault. Perhaps burnt valves or seats, gummed valve stems, or too little or no valve clearance, are waiting to be discovered after the head is removed from the block.

And now.....VALVES-OUT-OF-HEAD

Initially, with the valves in head, each one (intake and exhaust) was measured with a depth gage or dial caliper, noting the distance between the cylinder head upper surface and the end of the valve stem above the springs and retainers. All sixteen dimensions are later adjusted individually with compensating washers at reassembly. The purpose is to retain the manufacturer's spring tension, even though the seats may be cut deeper into the head due to resurfacing. After recording these valve stem readings, the valves are removed with a valve compressor, along with the associated hardware and stored sequentially. (I used a fabricated wood tray.)

First, all of the valves were cleaned using a motorized wire wheel; removing gum, carbon and combustion deposits. The valves are placed back in the cylinder head while noting valve stem and valve guide clearance. The Buick Shop Manual allows a .0015 to .004 tolerance for wear. Another technique is to measure how far the valve wobbles while slightly off its seat (approximately .006). A new valve should check out better than your original used valve. In my situation I decided to retain all intake and exhaust valves, but to grind

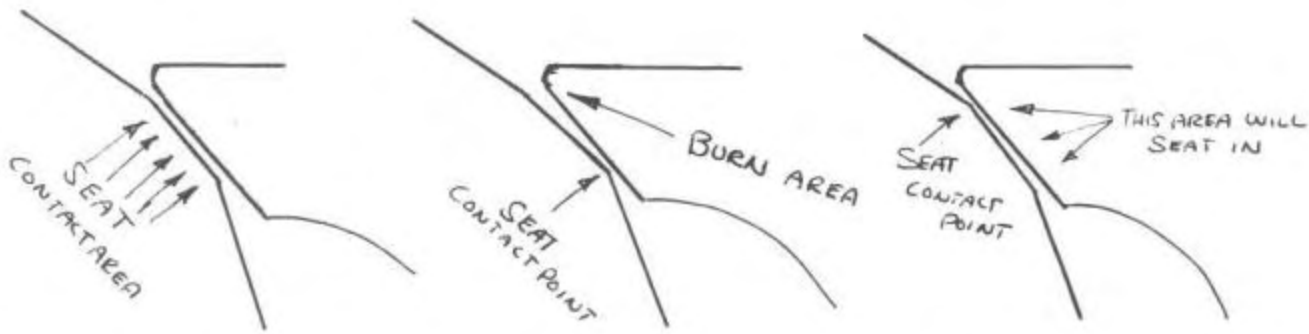


Extracting valves from the head with a spring compressor.

the surface on each one in a valve grinder. There are two usual methods of grinding valves. One is to grind them directly to the seat with a hand grinding tool and grinding or lapping compound. The other method is to reface the valve in an electric valve refacing machine. Having chosen the latter as the faster and more accurate procedure, I progressed by employing our vintage valve grinding machine, carefully grinding intake and exhaust valves by removing the minimum amount of material. Liquid coolant was applied while grinding. The valve is rotated to permit even cooling, and to retain valve and stem concentricity. Your automotive machine shop is set up to do this operation alone or in combination with resurfacing the valve seats. Often the cost of resurfacing valves is little less than the price of new, modern alloy valves from after-market sources.

When resurfacing valves, I angle them off by one degree to the seats in the head. This is done so that the valve can seat on its larger diameter first. This is the combustion side of the valve and is most vulnerable to burning. By compromising the seating here , rather than on the inside or lower diameter, we promote faster heat transfer, thus longer valve life.

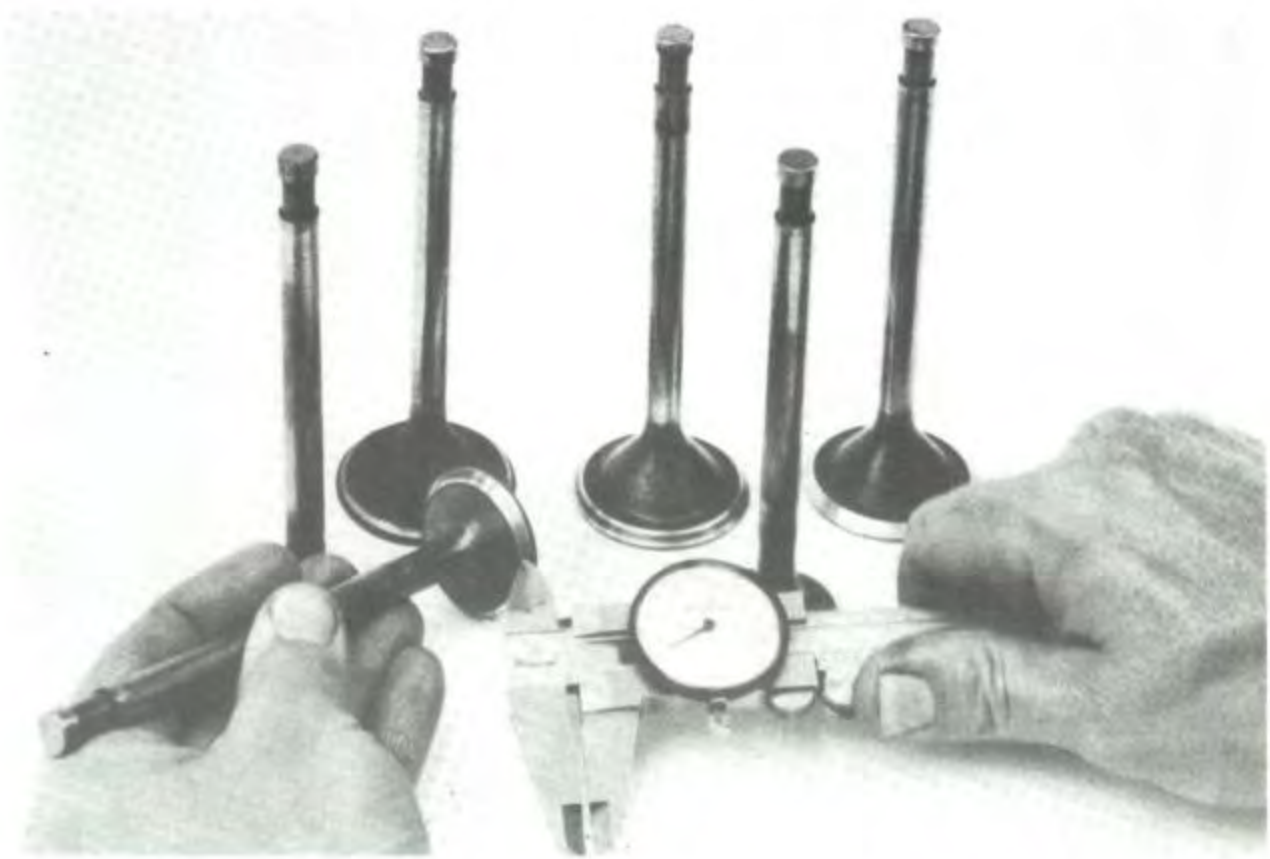
A theoretically ideal engine would have valves and seats machined at precisely the same 45-degree angle, with perfect uniform mating of surfaces where the valve is closed. In practice this is seldom, if ever, achieved. It is preferable to purposely introduce a slight deviation, in the manner shown in the drawing, than to permit the poor seating that would result from the converse deviation.



THEORETICAL IDEAL POOR PRACTICAL COMPROMISE

It cannot be stressed enough that on the head the seats must be kept narrow: .065-.070 is ideal. Unit pressure on this seating area causes positive sealing and the chopping of carbon particles if trapped on the seat. Valve burning occurs when the valve doesn't close all the way. Hot combustion gases blow by the opening and contribute to rapid failure of this fundamental, yet fragile, environment.

When resurfacing the cylinder head valve seat, a light grind is made with the seat grinder. Then the seats are narrowed, either by grinding or cutting, at 15 degrees and 75 degrees following comparison measurements of the valve area. Again, the seat grinder is applied to clean up any rough surfaces from the previous operation. Finally, the valve is tested in the seat, first by



Measuring valve surfaces with a dial caliper. If the 45-degree surface and edge are too thin, the valve must be replaced.

following an old technique of placing the valve stem in the valve guide and causing the valve to "bounce" on the seat. Even seating on both surfaces will make the valve vibrate and bounce as it closes. Also check sealing using a small amount of gasoline in the combustion chamber with intake and exhaust valve and spark plug in place. Caution is applied whenever gasoline is involved. This test should indicate little or no fluid escaping into the port area. When all procedures check out, it's time for reassembly.

Remember to thoroughly clean valves and head of grinding dust and grit before installation (use soap and water). At this stage the valves are placed in their respective holes and second measurement is made to determine distance between the top of the valve stem and head. Corresponding washers are placed as shims to match original dimensions recorded earlier. If springs appear weak, then replace them with an after-market product from one of the many straight-eight Buick sources. (Terrill Machine in Texas is one such source.)

Place both springs and retainer over the valve guide. Insert a pre-lubricated valve through the head and with a spring compressor install the two split collets with perhaps a tweezer or magnet.

With all sixteen valves in place, a new head gasket and a light coating of oil on the mating surface, the head is ready for its marriage to the block.

Close-up of valve surfaces before grinding shows rust, ridges from a previous grind, pitting, and nicks from pieces of disintegrating piston rings caused by a poorly-done ring job in the past.

Intake valves (top) and exhaust valves before and after grinding (before on the right). Note seat marks on the intake valve and pitting on the exhaust valve.

Author Culp's valve grinder in operation; valve head is rotated against a grinding wheel lubricated with liquid coolant.

PARTS EXCHANGE

PARTS FOR SALE

All for 1937 40-series, except where noted:

Door arm rest	$6	Breather pipe	$9
Light switch, no cutout.	6	Headlight side chrome...	6
Rt. rear fender (40, 60)	35	Hood ornament-no tail...	10
Front coil springs.....	25	Thermostat housing - 40 & 60.....	8
Radiator- porous core, good tanks & frame- large series.....	40	Hand brake handle.....	8
Heater core-OK.....	20	Dome light repro.....	10
Left & right exhaust manifold sections, pr.	35	Belt molding set- missing 1 cowl piece & hood pieces.....	20
Rear bumper brackets,pr.	30	Parting out series 40 engine: Write for needs.	
Rt. front bumper bracket	15		
Starter.....	20		
Tail light-complete.....	8	All prices plus 15% shipping.	
Speedo cable.....	8		

LEO AMARANTES (#105). 66 Haskell St., Fall River, MA 02720
617/674-6633

1937/1938 Buicks. I have been parting out all 8 series for the past 20 years. Send itemized list of used parts required and 45¢ in coin for an answer. No radios in stock. Most Canadian components were produced in U.S.A. Shipping extra. My motto: Scrap 100 to make 1000 run. Car #50 coming in next week. Will I ever reach 100? Free delivery to Hershey with 10% deposit.
ROBERT L. JAMES (#371). P.O.Box 531, Whitby, Ontario L1N 5V3 CANADA. 416/655-3447.

BUICK STANDARD TRANSMISSION GASKET KIT. All gaskets and seals needed when rebuilding or resealing your transmission. Will fit 1937-1938 all series. $12.95 postpaid (N.J. residents add 6% sales tax.) Send check or money order with name and address; year and series of car.

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Holland, MI 49423 616/392-1761

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JECC, Inc. (Jerry Pasquariello #643)
P.O. Box 616
West Paterson, NJ 07424
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PARTS WANTED

WANTED: For '37 model 41: Chrome for front fender lights, suitable for replating. LOUIS ("RICH") DICKMAN (#765). 9912 Baughmann Rd., Harrison, Ohio 45030. 513/367-0514.

WANTED: Right headlight lens; '38 large series fuel pump (combination fuel & vacuum pump). CHARLES JEKOFSKY (#524). 6307 North Capitol St., Washington, D.C. 20011. 202/829-0471.

WANTED: '37 90 series left side running board. BOB HAMRO. 3241 Williams Rd., San Jose, CA 95117. 408/246-0239.

CARS FOR SALE • WANTED

CAR FOR SALE: 1938 Century sport sedan-model 67. Restored and proven in 5000 miles of driving since 1985. Dual sidemounts, Sr. Trippe lights, wide whites, upgraded engine, blue leather, grey metallic paint. $14,000.
BOB PIPKIN (#76). 2516 62nd SE, Salem, OR 97301.

1938 Limited model 91. Converted to 12-volt electrical system. A/C unit mounted in trunk. Comes with stocked bar. Asking $17,500. Call Al LeGrow: days 516/234-0199; eves 516/736-0456. (Long Island, NY). (Editor's Note: this is the car formerly owned by member Bruce Sackman; it is pictured in Vol.VI, No.4)

CAR WANTED: 1938 Century or Roadmaster 4-door. Prefer car with sidemounts in 7-10 condition. HANS EGGER (#770). 1425 N.W.48 St., Vancouver, WA 98663. 206/693-4139.

CAR WANTED: 1938 model 61 in good driveable condition. I have to get it home! DARRYL COMSTOCK (#614). 6104 Nelson Place, SW, Albany, OR 97321. 503/926-3670 (No Saturday calls, please.)

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